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**Erratum: “Azide–water intermolecular coupling measured by two-color two-dimensional infrared spectroscopy” [J. Chem. Phys. 136, 224503 (2012)]**

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## Erratum: “Azide–water intermolecular coupling measured by two-color two-dimensional infrared spectroscopy” [J. Chem. Phys. **136**, 224503 (2012)]

Joanna Borek,<sup>1</sup> Fivos Perakis,<sup>1</sup> Felix Kläsi,<sup>1</sup> Sean Garrett-Roe,<sup>2</sup> and Peter Hamm<sup>1,a)</sup>

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After publication of Ref. [1](#), it has been brought to our attention that Hochstrasser and co-workers have studied essentially the same molecular system (i.e.,  $\text{N}_3^-$  in  $\text{H}_2\text{O}$  instead of  $\text{D}_2\text{O}$ ) by two-color 2D IR spectroscopy before us.<sup>[2](#)</sup> A cross peak is also observed, which less likely is due to population transfer because of the even larger energy gap from the  $\text{N}_3^-$  asymmetric stretch vibration to the  $\text{H}_2\text{O}$  band. We had based our conclusion, that population transfer is the dominant coupling mechanism, mostly on the large frequency separation of the 0-1 and the 1-2 transition in the 2D IR spectra, which reflects the large anharmonicity of the OD vibrator itself.<sup>[1](#)</sup> The 1-2 transition is not shown in Ref. [2](#), so we cannot decide whether an alternative coupling mechanism might be responsible for the cross-peak between  $\text{N}_3^-$  in  $\text{H}_2\text{O}$ . Nonetheless, Ref. [2](#) found a tilt in the cross-peak, evidencing a correlation in the vibrational frequencies of the  $\text{N}_3^-$  and the  $\text{H}_2\text{O}$  vibrations, which is another consequence of the coupling to azide-bound water.

<sup>1</sup>J. Borek, F. Perakis, F. Kläsi, S. Garrett-Roe, and P. Hamm, *J. Chem. Phys.* **136**, 224503 (2012).

<sup>2</sup>C.-H. Kuo, D. Y. Vorobyev, J. Chen, and R. M. Hochstrasser, *J. Phys. Chem. B* **111**, 14028 (2007).

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